



UNITED STATES PATENT AND TRADEMARK OFFICE

18

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,800	11/19/2002	Robert Stephen Cooke	FHW-100US	6216
7590 Lahive & Cockfield 24th Floor 28 State Street Boston, MA 02109			EXAMINER KAO, CHIH CHENG G	
			ART UNIT 2882	PAPER NUMBER

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/049,800	COOKE ET AL.	
	Examiner	Art Unit	
	Chih-Cheng Glen Kao	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14 and 17 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2/15/02. 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

2. Claims 1, 10, and 17 are objected to because of the following informalities, which include grammatical problems along with lack or antecedent basis problems that appear to be minor draft errors: (claim 1, line 1, “the gantry”), (claim 1, lines 2-3, “the apparatus”), (claim 10, line 2, “the position”), and (claim 17, line 2, “thereon apparatus”).

The following respective suggestions may obviate the objections: (claim 1, line 1, replace “the” with - -a- -), (claim 1, lines 2-3, replace “apparatus” with - -device- - in the phrase “a radiation therapy apparatus” as recited in line 2), (claim 10, line 2, replacing “the” with --a--), (claim 17, line 2, insert - -an- - after “thereon”).

For purposes of examination, the claims have been treated as such. Appropriate correction is required.

3. Claim 18 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al. (US Patent 4995068) in view of Nguyen et al. (US Patent 5138647).

5. With regards to claims 1 and 17, Chou et al. discloses an apparatus for positioning a device (Fig. 2A) relative to a gantry (Fig. 1, #12) of a radiation therapy device (Abstract, line 1), comprising a mounting device for mounting the apparatus on a surface of the gantry (Fig. 1, #30), and a telescopically extendable arm connected to the mounting device (Fig. 2A).

However, Nguyen et al. does not disclose an arm pivotally connected or a holder for holding an imaging device, wherein the holder is connected to a distal portion of the arm.

Chou et al. teaches an arm pivotally connected (Fig. 4, #228) in another embodiment. Nguyen et al. teaches a holder for holding an imaging device, wherein the holder is connected to a distal portion of the arm (Fig. 1, holder for #17).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the apparatus of Chou et al. with an arm pivotally connected, since one would be motivated to incorporate this arrangement to further retract the arm away (Fig. 4) as implied from Chou et al.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the apparatus of Chou et al. with the holder of an imaging device of Nguyen et al., since one would be motivated to incorporate one to place an image converter for imaging as shown by Nguyen et al. (col. 3, lines 35-44).

Art Unit: 2882

6. With regards to claim 2, Chou et al. further discloses the arm comprising two or more elongate elements in slidable communication (Fig. 2A).

7. With regards to claim 3, Chou et al. in view of Nguyen et al. suggest an apparatus as recited above.

However, Chou et al. does not disclose linear bearings.

Nguyen et al. teaches linear bearings (col. 3, lines 55-57).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the suggested device of Chou et al. in view of Nguyen et al. with linear bearings, since one would be motivated to use these for easy operation of the arm as shown by Nguyen et al. (col. 3, lines 55-58).

8. With regards to claim 4, Chou et al. further discloses the elongate arms not sharing a common central axis (Fig. 2A, #123 and 124).

9. With regards to claims 5 and 6, Chou et al. in view of Nguyen et al. suggest an apparatus as recited above.

However, Chou et al. does not disclose mounting substantially about the center of mass of the arm and imaging device.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the suggested device of Chou et al. in view of Nguyen et al. with mounting substantially about the center of mass, since rearranging parts of an invention involves

Art Unit: 2882

only routine skill in the art. One would be motivated to have such an arrangement to provide a connection point that does not have as much strain.

10. With regards to claim 7, Chou et al. teaches a holder slidably mounted so as to slide along the extendable arm (Fig. 1, #122).

11. With regards to claim 8, Chou et al. further teaches a holder comprising means for sliding the imaging device along an axis perpendicular to a longitudinal axis of the arm (Fig. 1, #30).

12. With regards to claim 9, Chou et al. in view of Nguyen et al. suggest an apparatus as recited above.

However, Chou et al. does not disclose the holder as detachable.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the suggested device of Chou et al. in view of Nguyen et al. with the holder as detachable, since constructing a formerly integral structure in various elements involves only routine skill in the art. One would be motivated to have a detachable holder as a way to fix the part in another location without taking the entire apparatus.

13. With regards to claim 10, Chou et al. in view of Nguyen et al. suggest an apparatus as recited above.

However, Chou et al. does not disclose the holder comprising means for locking a position of the imaging device.

Nguyen et al. teaches the holder comprising means for locking a position of the imaging device (Fig. 8).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the suggested device of Chou et al. in view of Nguyen et al. with the locking means, since one would be motivated to use this to hold the arm in place as implied from Nguyen et al. (Fig. 8).

14. With regards to claim 11, Chou et al. further discloses means for rotating the imaging device about an axis parallel to a longitudinal axis of the arm (col. 2, lines 15-16).

15. With regards to claim 12, Chou et al. further discloses counterbalancing means for holding the arm under gravity (Fig. 1, #30).

16. With regards to claim 14, Chou et al. further discloses means for activating (Fig. 2A and 2B).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - F (9 am to 5 pm).

Art Unit: 2882

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


gk


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER